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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,570	02/09/2004	Sudhir Govind Deshmukh	IJ0077USNA	1447

23906 7590 07/14/2006

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EXAMINER

FIDLER, SHELBY LEE

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Objections

Claim 21 recites the limitation "said target substrate" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6, and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al. (US 2004/0085565 A1) in view of Hirst et al. (US 5930553), and further in view of Cook (US 6155664).

Owen et al. teach the following:

***regarding claim 1, a dispensing device comprising:**

(A) a client computer usable storage medium (*element 54*) located in a client computer of the dispensing device (*Figure 4*), and a host computer usable storage medium (*element 74*) located in a host computer (*Figure 4*) of a manufacturer of dispensable compositions (*This is a recitation of intended use, which does not patentably differentiate the claimed host computer from the host computer of Owen et al. since the host computer of Owen et al. is capable of being a*

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manufacturer of dispensable compositions) in communication with the client computer (*element 78, Figure 4*);

(B) one or more reservoirs (*element 32B*) containing the dispensable compositions (*elements 64, Figure 4*), the reservoirs being positioned in the dispensing device (*paragraph 29, lines 4-5*), and having identification tags (*memory tag 36*) affixed thereto (*paragraph 29, lines 6-7*);

(C) means for dispensing one or more dispensable compositions through one or more dispensing heads (*dispensing head is inherent to inkjet printing device 104B, paragraph 26, lines 1-2*), the means for dispensing being in communication with the client (*via unreferenced arrows through interrogator 52, Figure 4*) and the host computers (*via network 76, Figure 4*).

(D) means (*interrogator 52*) for reading current dispensable composition information of the dispensable compositions disposed on the identification tags (*paragraph 30, lines 17-19 and paragraph 30, lines 7-10*).

(E) means (*interrogator 52*) for writing updated dispensable composition information of the dispensable compositions to the identification tags (*paragraph 30, lines 17-19 and paragraph 17, lines 1-7*); and

(F) computer readable program code (*paragraph 15, lines 7-11*) means for dispensing one or more dispensable compositions (*paragraph 16, lines 2-5*), wherein the computer readable program code means comprises:

(F1) means for configuring computer readable program code devices to cause the means for reading to read the current dispensable composition information (*paragraph 39, lines 14-18*) and to store the current information on the client computer and the host computer (*paragraph 21, lines 1-5*);

(F2) storing dispensable composition information of the dispensable compositions on the host computer and the client computer (*paragraph 21, lines 1-5*).

(F4) means for configuring computer readable program code devices to cause the host computer to generate the updated dispensable composition information of the dispensable compositions (*paragraph 21, lines 1-9 in combination with paragraph 39, lines 14-17 show that the host processor 202 executes updatable composition information*); and

(F5) means for configuring computer readable program code devices to cause the means for writing to write the updated dispensable composition information to the identification tags and to store the updated information on the host computer, or on the client computer and the host computer (*paragraph 21, lines 1-9*)

***regarding claim 4**, the identification tag is a RFID tag (*paragraph 29, lines 8-9*)

***regarding claim 5**, one or more identification tag interrogators comprise the means for reading and writing (*paragraph 30, lines 17-19*)

***regarding claim 6**, the identification tag is a passive or an active RFID tag (*paragraph 31, lines 1-7*)

***regarding claims 8 and 20**, the dispensable composition is an electrically conductive ink (*paragraph 18, line 7*)

***regarding claim 9**, the dispensing composition is dispensed on a target substrate (*paragraph 34, lines 6-8*)

***regarding claim 10**, the target substrate is a cellulose paper (*paragraph 34, line 8*)

***regarding claim 11**, the means (F2) comprise means for configuring computer readable program code devices to cause the host computer to determine the amount of the dispensable compositions remaining in one or more of the reservoirs (*paragraph 43, lines 13-17*)

***regarding claim 12**, the means (F4) comprise means for configuring computer readable program code devices to cause the host computer to deduct dispensed quantities of one or more of the dispensable compositions (*paragraph 36, lines 7-10*) from current quantities registered in the current dispensable composition information (*paragraph 39, lines 22-25*) to arrive at updated quantities of one or more dispensable compositions (*paragraph 39, lines 16-17*) registered in the updated dispensable composition information (*paragraph 17, lines 1-7*)

***regarding claim 14**, the computer usable storage medium having the computer readable program code means is stored on a portable computer usable storage medium (*paragraph 39, lines 1-5 and paragraph 38, lines 11-14*)

***regarding claim 15**, the portable computer usable storage medium is a CD-ROM (*paragraph 38, line 14*)

***regarding claim 16**, the client computer is located in one state or country and the host computer is located in another state or country (*This is a recitation of intended use, which does not patentably differentiate the claimed client computer from the client computer of Owen et al. since the client computer of Owen et al. is capable of being located in a different state or country; Fig. 1 and paragraph 24*)

***regarding claim 17**, the host computer is in communication with a plurality of the client computers (*paragraph 24, lines 1-6*)

***regarding claim 18**, the client computer is in communication with a plurality of host computers (*paragraph 24, lines 17-24*)

***regarding claim 21**, the target substrate is a polymeric film, woven or non-woven fabric, biologically active substrate, or a circuit board (*This is a recitation of intended use, which*

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does not patentably differentiate the claimed substrate from the substrate of Owen et al. since the substrate of Owen et al. is capable of being a circuit board)

***regarding claim 22**, the circuit board is a RFID tag (*This is a recitation of intended use, which does not patentably differentiate the claimed substrate from the substrate of Owen et al. since the substrate of Owen et al. is capable of being an RFID tag*)

Owen et al. do not expressly teach the following:

***regarding claim 1**, the computer readable program code resides in the client computer usable storage and the host computer usable storage media;

(F2) means for configuring computer readable program code devices to cause the means for dispensing to terminate dispensing the dispensable compositions if the current information does not match with stored dispensable composition information of the dispensable compositions; and

(F3) means for configuring computer readable program code devices to cause the means for dispensing to dispense the dispensable compositions in accordance with a dispensing program if the current information matches with the stored dispensable composition information

***regarding claim 2**, the reservoirs are positioned in one or more racks of the dispensing device

***regarding claim 13**, the dispensing head is a printhead

***regarding claim 19**, the computer readable program code means comprise means for configuring computer readable program code devices to cause the means for dispensing to terminate dispensing of the dispensable compositions when a refilled reservoir or a previously

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used up reservoir whose contents had been exhausted during earlier dispensing cycles is positioned in the device

Hirst et al. teach the following:

*regarding claim 1, (F) the computer readable program code resides in the client computer usable storage and the host computer usable storage media (*col. 2, lines 33-37*)

Cook teaches the following:

*regarding claim 1, (F2) means for configuring computer readable program code devices (*controller 31, col. 10, line 36*) to cause the means for dispensing to terminate dispensing the dispensable compositions if the current information does not match (*col. 10, lines 46-49*) with stored dispensable composition information of the dispensable compositions (*col. 10, lines 36-41*); and

(F3) means for configuring computer readable program code devices (*controller 31, col. 10, line 36*) to cause the means for dispensing to dispense the dispensable compositions in accordance with a dispensing program if the current information matches (*col. 10, lines 41-46*) with the stored dispensable composition information (*col. 10, lines 36-41*)

regarding claim 2, the reservoirs are positioned in one or more racks of the dispensing device ("carriage" is read as rack, col. 5, lines 39-40*)

*regarding claim 13, the dispensing head is a printhead (*col. 5, line 29*)

*regarding claim 19, the computer readable program code means comprise means for configuring computer readable program code devices to cause the means for dispensing to terminate dispensing of the dispensable compositions when a refilled reservoir or a previously used up reservoir whose contents had been exhausted during earlier dispensing cycles is positioned in the device (*col. 11, lines 34-43*)

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize computer readable program code residing in the client computer and the host computer (*Hirst et al.*), and to terminate dispensing if the current information does not match with stored information (*Cook*) into the invention of Owen et al. The motivation for doing so, is to provide a robust two-way communications link between a host device and an image forming device (*Hirst et al.*, col. 2, lines 25-28) and to properly control the printer based on the compatibility of the ink and the printhead (*Cook*, col. 1, lines 53-58 and col. 2, lines 25-28).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al. as modified by Hirst et al. and Cook, as applied to claim 1 above, and further in view of Allen (US 4973993).

Owen et al. as modified by Hirst et al. and Cook teach all claimed limitations except for the following:

***regarding claim 3**, the reservoir is a disposable bag nested in a receptacle located in the dispensing device

Allen teaches the following:

***regarding claim 3**, the reservoir is a disposable bag (*col. 4, lines 27-28*) nested in a receptacle (*element 14 nested in element 142, Figure 3*) located in the dispensing device (*col. 1, lines 7-8*)

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a disposable bag nested in a receptacle in the invention of Owen et al as modified by Hirst et al. and Cook. The motivation for doing so, as taught by Allen, is that the bag can be replaced when empty (*col. 4, lines 27-28*).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al. as modified by Hirst et al. and Cook, as applied to claim 1 above, and further in view of Lawler, Jr. et al. (US 5964656).

Owen et al. modified by Hirst et al. and Cook teach all claimed limitations except for the following:

***regarding claim 7, the RFID tag is disposed on an insulated substrate.**

Lawler, Jr. et al. teach the following:

***regarding claim 7, the RFID tag is disposed on an insulated substrate (col. 9, lines 27-29)**

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize an RFID tag that is disposed on an insulated substrate into the invention of Owen et al.'s as modified by Hirst et al. and Cook. The motivation for doing so, as taught by Lawler, Jr. et al., is that the insulated material ensures that the tag is kept insulated from ferrous materials, which are known to interfere with the operation of the tag (col. 9, lines 11-15).

Response to Arguments

Applicant's arguments filed 4/27/2006 have been fully considered but they are not persuasive. In response to applicant's argument that a printer in Owen et al. is not a computer, paragraph 34, lines 3-5 teach that the printing device includes a logic component 62 to execute instructions. Since the definition of a computer is "a device that computes, especially a programmable electronic machine that performs high-speed mathematical or logical operations or that assembles, stores, correlates, or otherwise processes information," the logical component 62 of Owen et al. discloses a computer.

In response to applicant's argument that Owen et al. do not teach a means (C) for dispensing in communication with a client computer and a host computer, paragraph 34, lines 5-8 teach an output mechanism 65 for dispensing the dispensable compositions. Lines 3-5 of the same paragraph teach that the printer logic component 62 is included to execute instructions for a printing operation, which, as paragraph 2, lines 1-8 shows, includes dispensing the dispensable compositions; therefore, the output mechanism 65 is in communication with the client computer. Paragraph 37 of Owen et al. shows that the printing device 30B, and thus the printer logic component 62, is in communication with computer 67. Also, paragraph 36, lines 9-10 show that a user may use computer 67 to schedule a print job, which requires communication with output mechanism 65. Therefore, Owen et al. teach the output mechanism 65 is in communication with a host computer.

In response to applicant's argument that Owen et al. do not teach means (F1) for configuring computer readable program code devices to cause the means for reading to read the current dispensable composition information and to store the current information on the client computer and the host computer, paragraph 21 of Owen et al. teach that both memories in the printing device and memories in the host computing system can be used to store replaceable component usage data. In paragraph 30, lines 17-19, Owen et al. teaches that the interrogator 52 reads the contents of replaceable component usage data 50.

In response to applicant's arguments that Owen et al. do not teach means (F4) for configuring the computer readable program code devices to cause host computer to generate the updated dispensable composition information of the dispensable compositions, paragraph 39, lines 14-18 shows that processors 202 calculate availability of a replaceable component; lines 3-5 of paragraph 38 show that the processors 202 are included in computer 67.

In response to applicant's arguments that Owen et al. do not teach means (F5) for configuring computer readable program code devices to cause the means for writing to write the updated dispensable composition information to the identification tags and to store the updated information on the client computer and the host computer, paragraph 21 of Owen et al. teach that the replaceable component usage data may be stored in the printing device, the replaceable component, and the host computing system. Paragraph 17, lines 6-7 show that the replaceable component usage data is updated during printing, and paragraph 30, lines 17-20 teach that the interrogator 52 performs writing of the replaceable component usage data 50.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication with the USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelby Fidler whose telephone number is (571) 272-8455. The examiner can normally be reached on MWF 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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